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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,900

08/18/2006

Eric Tarrerias

15472NP

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7590

05/26/2009

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EXAMINER

DEFRANK, JOSEPH S

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

05/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,900

Applicant(s)

TARRERIAS, ERIC

Examiner

JOSEPH DEFRANK

Art Unit

3724

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 2/5/09. Claims 1, 2, 4, 5, 7, and 10-12 are pending.

Claim Objections

2. Claims 1, 10, and 12 are objected to because of the following informalities: the word tempering is misspelled as "termpering". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 2, 4, 5, 7, and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. All three independent claims state the limitation "performing a tempering and hardening operation on the blade body fitted with a bead or strip of the make-up material." This limitation is somewhat ambiguous. It is unclear whether or not the tempering is performed on the blade body or the blade body and the bead or strip of the make-up material. It is noted that no order is specified with the steps of the method. For the purpose of examination, it will be interpreted both ways and various rejections will be made.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 2, 4, 7, 10, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Wallmann (US 6,316,065).
8. With respect to claims 1, 10, and 12, Wallmann discloses a method of fabricating a blade for a cutting tool (which can also be considered a cutting tool itself as blades are often held in hands; i.e. a razor blade used as a knife; further, Wallmann discloses the method being used to create saw blades; see column 3 lines 44-46), the blade (2) being made of steel or an alloy of stainless steels and having at least one cutting edge (3) extending over at least a portion of a periphery thereof, the method comprising the following steps: a) making a blade body (2) possessing at least one free edge (5) provided in a vicinity of the at least one cutting edge (3); b) projecting a make-up material (4) in the form of a powder (see column 3 lines 48-55) onto the at least one free edge (5), the hardness of the make-up material being greater than the hardness of the blade body; c) subjecting the make-up material powder (4) to a laser beam (9) at the same time as projecting the make-up material powder (please note that figures 1 and 3 clearly show this occurring at the same time) so as to form a bead or strip (see figure 1) on at least a portion of the at least one free edge (5); d) performing a tempering and hardening operation on the blade body fitted with a bead strip or strip of the make up material; and e) forming the cutting edge (3) in the strip of make-up material.

Examiner notes that due to the intense heat of the laser beam (9) on both the blade body and the bead, there is bound to be a tempering and (at the very minimum) a localized hardening of the blade body at the application point of the bead. The air surrounding the blade body is fully capable of quenching steel after heat has been

applied. Further "hardening" is provided to the blade body in the form of the bead being solidified from a powder form. Examiner notes that a further 103 rejection will be applied to double reject the claim language and clear up confusion with the ambiguous limitation.

9. With respect to claim 2, Wallmann discloses the method wherein said free edge is formed by a flat (5) extending perpendicularly to a main plane of the blade body (2; see figure 2).

10. With respect to claim 4, Wallmann discloses the method wherein the blade body (2) presents dimensions that are slightly smaller than those of the final blade (see figure 2).

11. With respect to claim 7, Wallmann discloses the method wherein that the blade body (2) is machined or ground before the step of forming the bead of make-up material. The blade body is formed (and thus machined of some sort) prior to receiving the added cutting material.

12. With respect to claim 11, Wallmann discloses the blade wherein the at least one cutting edge and the blade body are made of at least two different materials. Examiner notes that the blade body of Wallmann is made of a form of steel and the cutting edge is made up of a secondary metal with hard particles (see column 3 lines 48-52).

Claim Rejections - 35 USC § 103

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallmann in view of Pacher et al. (US 2003/0154841; as previously cited; hereafter "Pacher").

Wallmann does not disclose the joined strip or bead of make-up material and the

blade body being further machined by grinding, machining or abrading. Examiner notes that the edge of Wallmann is a blunt cutting edge as the cutting device is used in a hone. Examiner further notes that many different cutting edges exist and the use of secondary grinding is well known in the art to produce a desired cutting edge shape.

Pacher discloses a saw blade having a main blade body (2) having a contact surface (4) where a harder metal insert (1) is welded on with the aid of a laser (paragraph 5). Pacher further discloses the insert, after being fused with the main blade body, is then ground to produce an edge having the desired cutting tip shape (paragraph 22). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Wallmann to further include a grinding step to grind the fused insert in order to achieve a precise, desired cutting tip shape in view of the teachings of Pacher.

14. Claims 1, 2, 4, 7, 10, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallmann in view of Korb et al. (US 2003/0019332; as previously cited; hereafter "Kolb").

15. With respect to claims 1, 10, and 12, Wallmann discloses a method of fabricating a blade for a cutting tool (which can also be considered a cutting tool itself as blades are often held in hands; i.e. a razor blade used as a knife; further, Wallmann discloses the method being used to create saw blades; see column 3 lines 44-46), the blade (2) being made of steel or an alloy of stainless steels and having at least one cutting edge (3) extending over at least a portion of a periphery thereof, the method comprising the following steps: a) making a blade body (2) possessing at least one free edge (5)

provided in a vicinity of the at least one cutting edge (3); b) projecting a make-up material (4) in the form of a powder (see column 3 lines 48-55) onto the at least one free edge (5), the hardness of the make-up material being greater than the hardness of the blade body; c) subjecting the make-up material powder (4) to a laser beam (9) at the same time as projecting the make-up material powder (please note that figures 1 and 3 clearly show this occurring at the same time) so as to form a bead or strip (see figure 1) on at least a portion of the at least one free edge (5); and e) forming the cutting edge (3) in the strip of make-up material. Wallmann does not disclose performing a tempering and hardening operation (in the traditional sense) on the blade body fitted with a bead strip or strip of the make up material.

Examiner notes that tempering and hardening a blade is a well known technique used to modify hardness levels and brittleness levels in metals. Korb discloses that it is well known to temper a base strip for a blade various times in order to harden the material to desired levels (paragraph 4). Examiner notes that this technique is also disclosed by Pacher (paragraphs 22 and 23). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to temper the cutting tool of Wallmann in order to modify the hardness of the blade in view of the teachings of Korb. The technique for improving a particular class of devices was part of the ordinary capabilities of a person of ordinary skill in the art, in view of the teaching of the technique for improvement in other situations as taught by Korb.

16. With respect to claim 2, Wallmann discloses the method wherein said free edge is formed by a flat (5) extending perpendicularly to a main plane of the blade body (2; see figure 2).

17. With respect to claim 4, Wallmann discloses the method wherein the blade body (2) presents dimensions that are slightly smaller than those of the final blade (see figure 2).

18. With respect to claim 7, Wallmann discloses the method wherein that the blade body (2) is machined or ground before the step of forming the bead of make-up material. The blade body is formed (and thus machined of some sort) prior to receiving the added cutting material.

19. With respect to claim 11, Wallmann discloses the blade wherein the at least one cutting edge and the blade body are made of at least two different materials. Examiner notes that the blade body of Wallmann is made of a form of steel and the cutting edge is made up of a secondary metal with hard particles (see column 3 lines 48-52).

20. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallmann in view of Korb as applied to claim 1 above, and further in view of Pacher.

The modified apparatus of Wallmann does not disclose the joined strip or bead of make-up material and the blade body being further machined by grinding, machining or abrading. Examiner notes that the edge of Wallmann is a blunt cutting edge as the cutting device is used in a hone. Examiner further notes that many different cutting edges exist and the use of secondary grinding is well known in the art to produce a desired cutting edge shape.

Pacher discloses a saw blade having a main blade body (2) having a contact surface (4) where a harder metal insert (1) is welded on with the aid of a laser (paragraph 5). Pacher further discloses the insert, after being fused with the main blade body, is then ground to produce an edge having the desired cutting tip shape (paragraph 22). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Wallmann to further include a grinding step to grind the fused insert in order to achieve a precise, desired cutting tip shape in view of the teachings of Pacher.

21. Claims 1, 2, 4, 5, 7, 10, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallmann in view of Pacher and/or Anderson et al. (US Re. 26,676; hereafter "Anderson").

22. With respect to claims 1, 10, and 12, Wallmann discloses a method of fabricating a blade for a cutting tool (which can also be considered a cutting tool itself as blades are often held in hands; i.e. a razor blade used as a knife; further, Wallmann discloses the method being used to create saw blades; see column 3 lines 44-46), the blade (2) being made of steel or an alloy of stainless steels and having at least one cutting edge (3) extending over at least a portion of a periphery thereof, the method comprising the following steps: a) making a blade body (2) possessing at least one free edge (5) provided in a vicinity of the at least one cutting edge (3); b) projecting a make-up material (4) in the form of a powder (see column 3 lines 48-55) onto the at least one free edge (5), the hardness of the make-up material being greater than the hardness of the blade body; c) subjecting the make-up material powder (4) to a laser beam (9) at the

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same time as projecting the make-up material powder (please note that figures 1 and 3 clearly show this occurring at the same time) so as to form a bead or strip (see figure 1) on at least a portion of the at least one free edge (5); and e) forming the cutting edge (3) in the strip of make-up material. Wallmann does not disclose performing a tempering and hardening operation (in the traditional sense) on the blade body fitted with a bead strip or strip of the make up material.

Examiner notes that tempering and hardening a blade is a well known technique used to modify hardness levels and brittleness levels in metals. Pacher discloses a saw blade having a main blade body (2) having a contact surface (4) where a harder metal insert (1) is welded on with the aid of a laser (paragraph 5). The blade of Pacher, after the saw blade and insert have been ground to their final shape undergoes a final round of tempering. By definition, to temper is "to harden or strengthen (metal or glass) by application of heat or by heating and cooling" (see American Heritage Dictionary of the English Language, Fourth Edition). The blade of Pacher is thus tempered and hardened after the two blade portions have been fused together. Anderson discloses a similar blade having a main body (15) and a hardened strip (16) which is fused to the main body (see figure 2). After the two parts have been joined, the saw blade goes through an additional heat treatment (33) with which the blade is tempered in an oven (see column 4 lines 65+). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to temper the final blade of Wallmann in order to modify the hardness of the blade in view of the teachings of Pacher and/or Anderson.

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23. With respect to claim 2, Wallmann discloses the method wherein said free edge is formed by a flat (5) extending perpendicularly to a main plane of the blade body (2; see figure 2).

24. With respect to claim 4, Wallmann discloses the method wherein the blade body (2) presents dimensions that are slightly smaller than those of the final blade (see figure 2).

25. With respect to claim 5, Wallmann does not disclose the joined strip or bead of make-up material and the blade body being further machined by grinding, machining or abrading. Examiner notes that the edge of Wallmann is a blunt cutting edge as the cutting device is used in a hone. Examiner further notes that many different cutting edges exist and the use of secondary grinding is well known in the art to produce a desired cutting edge shape.

Pacher further discloses the insert, after being fused with the main blade body, is ground to produce an edge having the desired cutting tip shape (paragraph 22). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Wallmann to further include a grinding step to grind the fused insert in order to achieve a precise, desired cutting tip shape in view of the teachings of Pacher.

26. With respect to claim 7, Wallmann discloses the method wherein that the blade body (2) is machined or ground before the step of forming the bead of make-up material. The blade body is formed (and thus machined of some sort) prior to receiving the added cutting material.

27. With respect to claim 11, Wallmann discloses the blade wherein the at least one cutting edge and the blade body are made of at least two different materials. Examiner notes that the blade body of Wallmann is made of a form of steel and the cutting edge is made up of a secondary metal with hard particles (see column 3 lines 48-52).

Response to Arguments

28. Applicant's arguments filed with respect to claim 1 have been fully considered but they are not persuasive.

29. Applicant argues that "the claimed invention recites the step of forming a bead or strip on a portion of the free edge without use of a mold." Examiner respectfully disagrees. No such limitation exists in the claims.

30. Applicant further argues that "The Wallmann patent does not disclose... the forming of a bead or strip on a portion of the free edge." Examiner respectfully disagrees. This step is clearly shown in figures 1 and 3 as a bead (3') is clearly applied to the free edge (5) of the blade body (2).

31. Applicant's arguments with respect to claims 10-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH DEFRANK whose telephone number is (571)270-3512. The examiner can normally be reached on Monday - Thursday; 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Daniel Prone/
Primary Examiner, Art Unit 3724

Joseph De Frank
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